

SEMESTER IV
FINANCIAL RISK MANAGEMENT

Programme: M.Com (Applied Finance)

Course Code: P20/COM/DSE/401

Course Type: DSE

No. Of Credits:5

Max Marks: 100

Max Hours: 75

Hours per week: 5 hrs

Course Objective:

The objective of this course is to acquaint the students with the risk management process and to expose the students to various tools and techniques of risk management

Course Outcomes:

- CO1:** To explain the concept, need, types and sources of risk
- CO2:** To illustrate the risk management and reporting process
- CO3:** To evaluate the risk at corporate level
- CO4:** To assess the Value at Risk in an investment
- CO5:** To examine the concept and mechanics of forwards
- CO6:** To examine the concept and mechanics of futures
- CO7:** To describe the several types of swaps
- CO8:** To explain the mechanics of interest rate and currency swap
- CO9:** To identify the types of options
- CO10:** To comprehend the pricing of options.

MODULE I - INTRODUCTION:**(15 Hrs)**

The concept of Risk- Nature- Need and scope of risk. Source- measurement- identification and evaluation of Risk. Types of risk–Credit, Market, operational risk, Possible Risk events- Risk Indicators.. Risk management approaches and methods.. Risk reporting process–internal and external.

MODULE II - MEASUREMENT AND MANAGEMENT OF RISK:**(15 Hrs)**

Risk measurement at corporate level: Economic capital and RAROC.-Introduction-Meaning Of Economic Capital-Probability Of Default-Using Risk Adjusted Performance For Business Decisions- Measuring Credit Risk-Measuring Market Risk and measuring operational risk

Value at risk (VaR): The concept, Historical Simulation, Monte Carlo simulation, stress testing, back testing

MODULE III - FORWARD AND FUTURES:**(15 Hrs)**

Forwards: Definition- features and pay-off profile of Forward contract. Valuation of forward contracts. Forward Contracts to manage Commodity price risk- Interest rate risk and exchange rate risk. Limitations of Forward contract.

Futures: Definition. Clearing house- margin requirements- marking to the market. Basis and convergence of future price to spot price. Valuation of Futures contract. Differences between forward contracts and futures contracts. Risk management with Futures contracts–hedge ratio and the portfolio approach to a risk–minimizing hedge.(including problems)

MODULE IV - SWAPS:**(15 Hrs)**

Definition- Introduction to types of swaps like Simple Plain Swaps, Interest rate swaps, currency swaps,and others like Accrediting, Amortizing and Roller Coaster Swaps, Basis Swap, CMT Swaps, Total Return Swaps, Credit Default Swaps. Mechanics of Interest rate Swaps and currency swaps (including Simple problems)

MODULE V - OPTIONS:**(15 Hrs)**

Definition - Types - call option- put option- American option and European option. Options- in the money-at the money and out of the money. Option premium- intrinsic value and time value of options. Pricing of call and put options at expiration and before expiration. Options on stock indices and currencies. Introduction to Greeks, Black & Scholes option pricing model (BSOPM): assumptions.(including problems),

Suggested readings:

1. Dun and Bradstreet, Financial Risk Management, Tata Mc Graw hill
2. John C. Hull Sankarshan Basu, Options, Futures and Other Derivatives, Pearson Education.
3. Paul Hopkins, Kogan Page, Fundamentals of Risk Management, Institute of Risk Management.
4. Robert A Strong: Derivatives – An Introduction, Thomson, 2012
5. David. A. Dubofsky & Thomas. W. Miller, Jr., Derivatives Valuation and Risk Management, Oxford University Press.
6. Jean, Philippe, Bouchaud and Mark Potters, Theory of Financial Risk and Derivative Pricing,, Cambridge press
7. Rene. M. Stulz, Risk Management & Derivatives, Thomson Southwestern.
8. Jayanth Rama Varma, Derivatives and Risk Management, TMH.
9. Don M.Chance & Robert Brooks, Derivatives and Risk Management Basics, Indian Edition, Cengage Learning

FINANCIAL RISK MANAGEMENT
MODEL QUESTION PAPER

Course Code: P20/COM/DSE/401**Max Marks: 60****Time: 2 ½ Hrs**

SECTION - A

I. Answer any FIVE**5 x 2 = 10 M**

1. Concept of Risk Management
2. What is Economic Capital?
3. What is Convergence?
4. Roller Coaster Swaps
5. What is Out of the money Option?
6. VaR
7. Stress Testing
8. Interest Rate Swaps

SECTION - B

II. Answer the following**5 x 10 = 50 M**

9. Explain in detail the risk management process.

OR

10. Illustrate the various types of risks faced by the investors in financial Markets with an example?

11. Explain in detail the concept and computation of VAR methods.

OR

12. Explain the non-insurance methods of risk management

13. What are forwards and futures? What is the difference between them?

OR

14. a) Explain the meaning of the terms convenience yield and cost of carry.

- b) A stock index currently stands at 350. The risk free interest rate is 8% per annum (with continuous compounding) and the dividend yield on the index is 4% per annum. What should be futures price for a 4 month contract be?

15. Explain in detail the various types of Swaps.

OR

16. Companies A and B have been offered the following rates per annum on a \$20 million 5year loan:

Company	Fixed Rate	Floating Rate
A	5.0%	LIBOR + 0.1%
B	6.4%	LIBOR +0.6%

Company A requires a floating –rate loan; company B requires a fixed-rate loan. Design a swap that will net a bank, acting as intermediary, 0.1% per annum and that will appear equally attractive to both companies.

17. Explain the Black and Scholes Options Pricing Model.

OR

18. What is the time value of a call option? Describe the factors influencing the time value of option?